

## ABSTRACT

There is provided a measurement method of non-circularity of a core part of an optical fiber base material and an apparatus therefor, which can accurately and easily measure non-circularity of the core part, regardless of a refractive index difference between a core and a clad and an interval between a light projector and a photoreceiver. The method for measuring non-circularity of a core part of an optical fiber base material having the core part and a clad part includes the steps of: immersing the optical fiber base material in liquid having a refractive index substantially equal to that of the clad part of the optical fiber base material; irradiating parallel light from a side face of the optical fiber base material to measure intensity distribution of transmitted light; measuring a width of a dark space caused by light passing the core part on intensity distribution to obtain a relative value for a core diameter; rotating the optical fiber base material to further obtain the relative value for the core diameter at plural points for a circumferential direction; and obtaining non-circularity of the core part based on the obtained plurality of relative values for the core diameter.